

provider 20, the payer 30, and the incentive administrator 40. Thereafter, once this flow of data is understood, a more detailed explanation of the manner in which the incentive administrator 40 uses the data it receives to implement the incentive-based program according to the present will be described.

5 With reference to FIG. 2, there is shown that the patient 10 in Step 1 receives a service from the provider 20, which can be a physician, hospital, or other health service organization. Based upon the service provided by the provider 20, in Step 2, the provider 20 submits a claim to the payer 30 for that service. Each time the patient receives any service, whether that is a procedure performed by a physician, a test performed by a
10 laboratory, the filling of a prescription, or other related services, a separate claim for each will be provided. Each procedure is identified, typically, by a code such as a CPT4 procedure code. Further, many claims will contain a diagnosis code or codes, such ICD-9 diagnosis code codes, which can be used to assist in determining the condition of the patient automatically, as described further hereinafter. Also, certain claims may contain
15 an NDC drug code, identifying the prescribed medication. The different claims for that patient are then aggregated when determining the total cost for an episode of care. Furthermore, if a single patient is being treated for more than one type of condition, this may equate to more than 1 episode of care, and thereby require that each submitted claim identify the specific episode of care for which the patient is being treated.

20 The payer 30, upon receipt of the claim information, uses that information to determine an adjudicated claim amount. Using this adjudicated claim amount, the payer 30, as shown in step 3, can make a fee-for-service payment back to the provider 20, provide written documentation relating to the adjudicated claim, and will also provide

determination is made of the physician that is responsible for the particular episode of care for the particular patient. This step is significant since it is used in determining the particular physician, or other provider 20, that is to receive an incentive, if one is to be given. Thereafter, in step 600 there is a decision step performed that determines whether
5 errors exist in the data. After having had an initial preprocessing, grouping, and post-processing, there may be errors contained in the grouped data. For example, the step 400 post-processing logic adjustments can cause the claims data to be altered, and the thus altered claims data will typically need to be regrouped. Thus, when the post-processing logic adjustments are made, a regroup field can be set to indicate that regrouping in step
10 600 is needed. This process repeats until there are no problems that remain to be edited.

Thereafter, step 610 follows in which it is determined whether any of the episodes that have been grouped together are now closed. If not, then the data associated with non-closed episodes is returned to the open data set described in step 100 and will be used at the next periodic processing of the data.

15 For each closed episode, however, there then needs to be determined whether an incentive payment should be made. Initially, however, an outliers test step 650 is performed, described further hereinafter, to remove episodes of care that are extremes. Once those are removed, in step 680 there is a step that adjusts for comorbidity, otherwise known as effects of one illness that can exacerbate or make easier the treatment
20 of another illness. Once comorbidity is determined, then in step 700 there is a step of calculating the incentive payments, followed thereafter, by step 750 of making payments to various providers, the payer, and the incentive administrator.

Having described, in FIG. 5, an overview of the processing that takes places automatically by the present invention, the details of this processing will now be described. With reference to FIG. 6A-1, details of the preprocessing of claims data will now be described. Initially, as illustrated in FIG. 6A-1, in step 202, all of the open claims
5 are compared against each other to determine whether there are duplicate claims. If there are any duplicate claims, those duplicate claims are removed, as illustrated in halt step 205. For those claims that are not duplicates, they are then operated upon step 204, to determine whether there are any data exceptions. Such data exceptions include, for instance, claims that are missing required values, claims that contain invalid codes,
10 claims that contain non-sensical, coded combinations and types of claims for which the system has not previously identified baseline, minimum and maximum cost of the associated procedures. While most of these data exceptions can be tested for using conventional techniques, it is noted that it has been found useful to use a grouper to validate coded combinations, such as CPT and ICD codes. When the grouper is used in
15 this manner, a dummy group of new claims is made and codes within the dummy group are reviewed to determine if the codes therein are valid. Claims for which there are data exceptions are also removed, as shown by the halt step 205 for those claims, so that they can be individually reviewed and the necessary data associated therewith added.

Either using all of the claims that have passed through the data exceptions test
20 step 204 but, more preferably, using claims that have been corrected so that they now will pass through the data exceptions step 204, step 208 is used to identify new providers 20. As shown in the claim data that is provided and shown in FIG. 3A, there is an entry for a particular provider 20 that is associated with each claim. This provider may be the